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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,266	06/10/2005	Yoshito Tanaka	Q87376	1849
23373 7590 01/10/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER CHEUNG, WILLIAM K	
			ART UNIT 1713	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/10/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/538,266

Applicant(s)

TANAKA ET AL.

Examiner

William K. Cheung

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 and 16-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 16-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>061005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

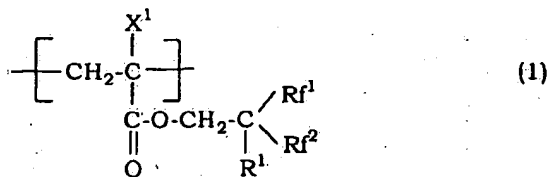
1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-11, 16-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Inukai et al. (US 5,149,753).

*The invention of claims 1, 12-16, 26 relates to a **fluorine-containing optical material** which comprises a **fluorine-containing copolymer** comprising from **32 to 36 % by mole of a structural unit (a)** represented by the formula (1):*

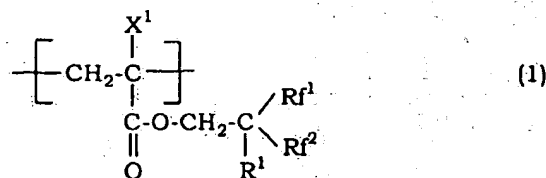


wherein X^1 is H, CH₃, F, CF₃ or Cl; Rf^1 and Rf^2 are the same or different and each is a perfluoroalkyl group having 1 to 5 carbon atoms; R^1 is a hydrocarbon group

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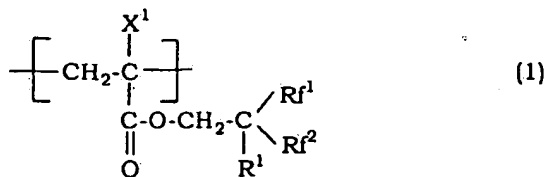
having 1 to 5 carbon atoms which may be substituted with fluorine atom, and from **64 to 68 % by mole of a structural unit (b)** derived from methyl methacrylate.

The invention of claims 2-11, 27-31 relates to a **fluorine-containing optical material** which comprises a fluorine-containing copolymer comprising from **15 to 62 % by mole of a structural unit (a)** represented by the formula (1):



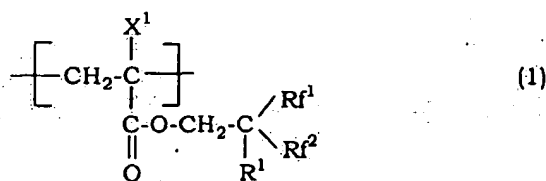
wherein X^1 is H, CH_3 , F, CF_3 or Cl; Rf^1 and Rf^2 are the same or different and each is a perfluoroalkyl group having 1 to 5 carbon atoms; R^1 is a hydrocarbon group having 1 to 5 carbon atoms which may be substituted with fluorine atom, from **12 to 70 % by mole of a structural unit (b)** derived from methyl methacrylate and from **1 to 40 % by mole of a structural unit (c)** (excluding the structural unit (a)) derived from a fluorine-containing monomer which is copolymerizable therewith.

The invention of claims 17, 18 relates to a **fluorine-containing copolymer** which has a weight average molecular weight of from **10,000 to 1,000,000** and comprises from **32 to 36 % by mole of a structural unit (a)** represented by the formula (1):



wherein X^1 is H, CH_3 , F, CF_3 or Cl; Rf^1 and Rf^2 are the same or different and each is a perfluoroalkyl group having 1 to 5 carbon atoms; R^1 is a hydrocarbon group having 1 to 5 carbon atoms which may be substituted with fluorine atom, and from **64 to 68 % by mole of a structural unit (b)** derived from methyl methacrylate.

The invention of claims 19-25 relates to a **fluorine-containing copolymer** which has a weight average molecular weight of from **10,000 to 1,000,000** and comprises from **15 to 62 % by mole of a structural unit (a)** represented by the formula (1):

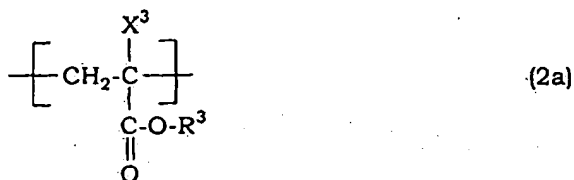


wherein X^1 is H, CH_3 , F, CF_3 or Cl; Rf^1 and Rf^2 are the same or different and each is a perfluoroalkyl group having 1 to 5 carbon atoms; R^1 is a hydrocarbon group having 1 to 5 carbon atoms which may be substituted with fluorine atom, from **12 to 70**

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% by mole of a structural unit (b) derived from methyl methacrylate and from 1 to 40

% by mole of a structural unit (c2) represented by the formula (2a):



wherein X^3 is H, CH_3 , F, CF_3 or C1; R^3 is H or a fluoroalkyl group; the structural unit represented by the formula (1) is excluded, and when R^3 is H, X^3 is neither H nor CH_3 .

Inukai et al. (abstract; col. 2, line 15 to col. 3, line 41) disclose a composition and its application as optical fiber (cladding materials) contains all the components of claims 1-11, 16-26. Regarding the claimed "weight average molecular weight of from 10,000 to 1,000,000", the examiner has a reasonable basis that the claimed molecular weight feature is inherently possessed in Inukai et al. in view of its claimed broad molecular weight range. Claims 1-11, 16-26 are anticipated.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
4. Claims 12-15, 27-31 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Inukai et al. (US 5,149,753).

Inukai et al. (col. 2, line 15 to col. 3, line 41) disclose a composition contains all the components of claims 1-5, 16-26. In view of the substantially identical composition of Inukai et al. as compared to the composition as claimed, the examiner has a reasonable basis that the claimed glass transition temperature, refractive index, and fluorine content features are inherently possessed in Inukai et al. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to

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applicants to show otherwise. In re Best, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977);
In re Fitzgerald, 205 USPQ 594 (CCPA 1980).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K. Cheung whose telephone number is (571) 272-1097. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (571) 272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



William K. Cheung, Ph. D.

Primary Examiner

January 3, 2006

**WILLIAM K. CHEUNG
PRIMARY EXAMINER**